

- 8 -

CLAIMS

1. A synchronous pump structure, particularly an immersion pump (1) equipped with a float control device (3) and comprising a synchronous electric motor (2) with a permanent-magnet rotor (8), characterised in that
5 the float (16) of said control device (3) is incorporated in an envelope (11), externally associated with the body (15) of the pump (1), and a sensor element (4) of said control device (3) is housed in the pump body (15) in correspondence with said float (16).
2. A pump structure according to claim 1, characterised in that said
10 sensor element is a level sensor (4) of the Hall-effect magnetic type.
3. A pump structure according to claim 1, characterised in that said float (16) is equipped in its lower part with a permanent magnet (19).
4. A pump structure according to claim 1, characterised in that said
15 envelope (11) comprises a cylindrical-cup-shaped base portion (13) and a lid (20) defining with said base portion (13) a closed chamber.
5. A pump structure according to claim 4, characterised in that the lid (20) comprises a knob (22) which can be handled by a user to adjust the position of the float (16) on the horizontal plane.
6. A pump structure according to claim 2, characterised in that said Hall
20 effect sensor (4) comprises a probe (27) mounted on an electronic board housed in the pump body (15) in a position underlying the float (16).
7. A pump structure according to claim 4, characterised in that said base
portion (13) has a side wall (23) equipped with a grate (29) to put the
25 internal part of the envelope (11) in fluid communication with the external environment.
8. A pump structure according to claim 7, characterised in that
internally, close to that side portion (23), a semi-cylinder-shaped filter
element (14) is provided.
9. A pump structure according to claim 8, wherein said filter (14) is kept
30 in position by two opposite bulkheads (24, 30) partially projecting towards

- 9 -

the internal part of the envelope (11).

10. A pump structure according to claim 2, wherein the position of the float (16) can be manually adjusted in order to be misaligned with respect to said sensor element (4).